UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,604	10/12/2001	Mark D. Penk	A-6727	3301

5642	7590	07/01/2005

SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
5030 SUGARLOAF PARKWAY
LAWRENCEVILLE, GA 30044

EXAMINER
ENGLAND, DAVID E

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/976,604	PENK ET AL.
	Examiner	Art Unit	
	David E. England	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2005*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 43 are presented for examination.

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "grouping multiple devices of the plurality of devices into a plurality of tiers within the digital network" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "determining whether the first plurality of devices is the same as the second plurality of devices; and responsive to determining the first plurality of devices is not the same as the second plurality of devices, generating an alert message." must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement

Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the

drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

and informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1 – 8, 20, 21, 33 – 36 and 39 – 43 are rejected under 35 U.S.C. 102(e) as being

anticipated by Teraoka U.S. Patent No. 6292836.

6.   Referencing claim 33, as closely interpreted by the Examiner, Teraoka teaches an

apparatus in a digital network that receives a transport stream, the apparatus comprising:

7.   a port adapted to receive the transport stream, wherein the transport stream has a

transport stream identifier associated therewith, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-*

B={VIP_C, port_C}" & col. 6, line 54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C,*

IP address of computer C=IPaddr_D"); and

8.   a processor in communication with the input port, the processor adapted to monitor the

transport stream identifier and respond to changes thereto by generating a network message, (e.g.

col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line 8,

"VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D").

9.   Referencing claim 34, as closely interpreted by the Examiner, Teraoka teaches the

network message includes a second transport stream identifier, wherein the second transport

stream identifier is the new transport stream identifier associated with the received transport

stream, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col.

7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D"*).

10.   Referencing claim 35, as closely interpreted by the Examiner, Teraoka teaches the

network message further includes a device identifier associated with the apparatus, (e.g. col. 6,

lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line 8, *"VIP*

address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D").

11.   Referencing claim 36, as closely interpreted by the Examiner, Teraoka teaches the

network message is transmitted through the port, (e.g. col. 5, lines 1 – 11).

12.   Referencing claim 39, as closely interpreted by the Examiner, Teraoka teaches a

transmitter in communication with the processors the transmitter adapted to transmit a second

transport stream that includes at least a portion of the received transport stream, (e.g. col. 6, lines

20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line 8, *"VIP address

of computer C=VIPaddr_C, IP address of computer C=IPaddr_D"*); and

13.   a second port adapted to receive and transmit messages, wherein the network message is

transmitted through the second port, and the network message includes a device identifier

associated with the apparatus, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"*

& col. 6, line 54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of

computer C=IPaddr_D"*).

14.   Referencing claim 40, as closely interpreted by the Examiner, Teraoka teaches the

network message includes the current transport stream identifier associated with the received

transport stream, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line

54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of computer

C=IPaddr_D"*).

15.   Referencing claim 41, as closely interpreted by the Examiner, Teraoka teaches the second

transport stream has a second transport stream identifier associated therewith, and the processor

receives a remapping message from the second port and responds thereto by remapping the

second transport stream identifier associated with the second transport stream, (e.g. col. 6, lines

20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D"*).

16.   Referencing claim 42, as closely interpreted by the Examiner, Teraoka teaches the processor receives an initiate mapping message from the second port and responds thereto by sending through the second port a network message having a device identifier associated with the apparatus and the transport stream identifier included therein, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D"*).

17.   Referencing claim 43, as closely interpreted by the Examiner, Teraoka teaches the processor receives an initiate mapping message from the port and responds thereto by sending through the port a network message having a device identifier associated with the apparatus and the transport stream identifier included therein, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D"*).

18.   Referencing claim 20, as closely interpreted by the Examiner, Teraoka teaches digital network further includes a plurality of transport stream receivers, which receive at least one transport stream, and further including the step of:

19.   receiving a message from multiple transport stream receivers of the plurality of transport stream receivers, each message per receiver including a device identifier and a transport stream

identifier, which is associated with a transport stream received by the transport stream receiver,

(e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line

8, *"VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D"*).

20.   Referencing claim 21, as closely interpreted by the Examiner, Teraoka teaches each of

the multiple transport stream receivers respond to and initiate mapping message by sending the

message, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 –

col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of computer C=IPaddr_D"*).

21.   Claims 1 – 8 are rejected for similar reasons as stated above.

Claim Rejections - 35 USC § 103

22.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

23.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Rao (6789118)

in view of Teraoka (6292836).

24.   Referencing claim 9, as closely interpreted by the Examiner, Rao teaches a method of

mapping a digital network that includes a plurality of devices that receive and transmit at least

one transport stream, the method comprising the steps of:

25.   grouping multiple devices of the plurality of devices into a plurality of tiers within the

digital network, (e.g. col. 20, lines 24 – 40); and

26.   associating a first particular device of a first tier with a second particular device of a

second tier of the digital network, wherein the second particular device receives a transport

stream transmitted from the first particular device, (e.g. col. 20, lines 41 – 63), but does not

specifically teach a transport stream with a transport stream ID. Teraoka teaches a transport

stream with a transport stream ID, (e.g., col. 1, lines 29 – 55 & col. 6, lines 20 – 35). It would

have been obvious to one of ordinary skill in the art at the time the invention was made to

combine Teraoka with Rao because utilizing a type of stream ID could aid in the differentiation

between packets that traverse a router. Furthermore, it may also be used in case a packet is

missing from transmission. If a packet is out of sequence then the correct sequence number that

is attached to the packet will differentiate it from other packets.

27.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao (6789118) in

view of Brandt et al. (6377993) (hereinafter Brandt).

28.   As per claim 10, as closely interpreted by the Examiner, Rao teaches a method of

mapping a digital network that includes a plurality of devices that receive and transmit at least

one transport stream, the method comprising the steps of:

29.   grouping multiple devices of the plurality of devices into a plurality of tiers within the

digital network, (e.g. col. 20, lines 24 – 40); and

30.   associating a first particular device of a first tier with a second particular device of a

second tier of the digital network, wherein the second particular device receives a transport

stream transmitted from the first particular device, (e.g. col. 20, lines 41 – 63), but does not

specifically teach the plurality of tiers including a source tier, an intermediate tier, and an output

tier. Brandt teaches the plurality of tiers including a source tier, an intermediate tier, and an

output tier, (e.g., col. 6, lines 18 – 39). It would have been obvious to one of ordinary skill in the

art at the time the invention was made to combine Brandt with Rao because providing an

intermediate tier could provide a secure web server and back end services to provide applications

that establish user sessions, govern user authentication and their entitlements, and communicate

with adaptor programs to simplify the interchange of data across the network.

31.   Claims 11 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao and

Teraoka as applied to claim 9 above, and in further view of Hegde (6570875).

32.   As per claim 11, as closely interpreted by the Examiner, Rao and Teraoka do not

specifically teach prior to the step of grouping, further including the steps of:

33.   transmitting an initiate mapping message to the plurality of devices; and

34.   receiving a network message from the plurality of devices, each network message per

device including an output transport stream identifier and a device identifier, wherein the

transport stream identifier is associated with a transport stream transmitted by a device

associated with the device identifier.

35.   Hegde teaches prior to the step of grouping, further including the steps of:

36.   transmitting an initiate mapping message to the plurality of devices, (e.g. col. 8, lines 7 –

17); and

37.   receiving a network message from the plurality of devices, each network message per

device including an output transport stream identifier and a device identifier, wherein the

transport stream identifier is associated with a transport stream transmitted by a device

associated with the device identifier, (e.g. col. 8, lines 18 – 32). It would have been obvious to

one of ordinary skill in the art at the time the invention was conceived to combine Hegde with

the combine system of Rao and Teraoka because it would be more efficient for a system to set up

links, port id and addresses to different groups when the system is powered on so updated

information that is on the system can be transmitted to the device to ensure that any changes in

the network are propagated throughout the network to ensure timely transmission of newly

installed devices or transmitted information.

38.   As per claim 12, as closely interpreted by the Examiner, Rao and Teraoka do not

specifically teach the step of grouping further includes the step of:

39.   using the device identifier included in each of the network messages and a table to group

the plurality of devices into tiers.

40.   Hegde teaches the step of grouping further includes the step of:

41.   using the device identifier included in each of the network messages and a table to group

the plurality of devices into tiers, (e.g. col. 7, lines 15 – 26). It would have been obvious to one

of ordinary skill in the art at the time the invention was conceived to combine Hegde with the

combine system of Rao and Tokuyo because of similar reasons stated above. Furthermore, if

there were a group of permanent users it would be advantageous to store the group of users in a

table so to reference them if needed in a multicast transmission circumstance.

42.   As per claim 13, as closely interpreted by the Examiner, Rao each of the network

messages further includes an input network stream identifier associated with a second transport

stream, which is received by a device associated with the device identifier, (e.g. col. 20, lines 41

– 59).

43.   As per claim 14, as closely interpreted by the Examiner, Rao the input network stream

identifier includes a network transport stream source indicator, (e.g. col. 20, lines 41 – 59).

44.   As per claim 15, as closely interpreted by the Examiner, Rao the network transport

stream source indicator is a predetermined value for a device that is a source of a network

transport stream in the digital network, (e.g. col. 20, lines 41 – 59).

45.   As per claim 16, as closely interpreted by the Examiner, Rao and Hegde do not

specifically teach determining whether a particular transport stream identifier associated with a

particular transport stream transmitted from a particular device of the multiple devices of a given

tier is the same as one or more transport stream identifiers associated with other transport

streams transmitted from one or more devices of the multiple devices of the given tier;

46.   responsive to determining the particular transport stream identifier is not the same,

associating the particular device with the particular transport stream identifier;

47.   responsive to determining the particular transport stream identifier is the same, further

including the steps of:

48.   determining a new transport stream identifier for the particular transport stream, wherein

the new transport stream identifier is different from other transport stream identifiers associated

with transport streams transmitted from the multiple devices of the given tier;

49.   transmitting a remap message to the particular device, wherein the particular device

responds thereto by remapping the particular transport stream identifier associated with the

particular transport stream to the new transport stream identifier; and

50.   associating the particular device with the new transport stream identifier.

51.   Teraoka teaches determining whether a particular transport stream identifier associated

with a particular transport stream transmitted from a particular device of the multiple devices of

a given tier is the same as one or more transport stream identifiers associated with other transport

streams transmitted from one or more devices of the multiple devices of the given tier, (e.g. col.

6, lines 20 – 35);

52.   responsive to determining the particular transport stream identifier is not the same,

associating the particular device with the particular transport stream identifier, (e.g. col. 6, lines

20 – 35);

53.   responsive to determining the particular transport stream identifier is the same, further

including the steps of:

54.   determining a new transport stream identifier for the particular transport stream, wherein

the new transport stream identifier is different from other transport stream identifiers associated

with transport streams transmitted from the multiple devices of the given tier, (e.g. col. 5, line 45

– col. 6, line 2);

55.   transmitting a remap message to the particular device, wherein the particular device

responds thereto by remapping the particular transport stream identifier associated with the

particular transport stream to the new transport stream identifier, (e.g. col. 6, line 56 – col. 7, line

8); and

56.   associating the particular device with the new transport stream identifier, (e.g. col. 6, line

56 – col. 7, line 8). It would have been obvious to one of ordinary skill in the art at the time the

invention was conceived to combine Teraoka with the combine systems of Rao and Hegde

because remapping a message with a different transport stream identifier would ensure that no

duplications in identifiers are given out to different system. Doing so would aid in miss-

transmission of information to devices that did not request said information.

57.   As per claim 17, as closely interpreted by the Examiner, Rao and Hegde do not

specifically teach after the step of transmitting the remap message, further including the step of:

58.   receiving another network message from a second particular device, wherein the second

particular device receives the particular transport stream transmitted from the first particular

device. Teraoka teaches after the step of transmitting the remap message, further including the step of:

59.   receiving another network message from a second particular device, wherein the second particular device receives the particular transport stream transmitted from the first particular device, (e.g. col. 6, line 56 – col. 7, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was conceived to combine Teraoka with the combine systems of Rao and Hegde because it would be more efficient for a system to reestablish communication with other network devices so the transfer of addresses and port numbers can be propagated throughout the network.

60.   As per claim 18, as closely interpreted by the Examiner, Rao and Hegde do not specifically teach the second particular device sends the other network message responsive to the first particular device remapping the particular transport stream identifier associated with the particular transport stream. Teraoka teaches the second particular device sends the other network message responsive to the first particular device remapping the particular transport stream identifier associated with the particular transport stream, (e.g. col. 6, line 56 – col. 7, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was conceived to combine Teraoka with the combine systems of Rao and Hegde because of similar reasons stated above.

61.   As per claim 19, as closely interpreted by the Examiner, Rao teaches associating the particular device with at least one input transport stream identifier, wherein the network message

from the particular device includes the at least one transport stream identifier, which is

associated with the at least one transport stream received in the particular device, (e.g. col. 20,

lines 41 – 59).

62.   Claims 22 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokuyo et

al. (6829238) (hereinafter Tokuyo) in view of Rao (6789118).

63.   Referencing claim 22, as closely interpreted by the Examiner, Tokuyo teaches a method

of mapping a digital network, the method comprising:

64.   assigning a unique transport stream identifier to each transport stream of a plurality of

transport streams, wherein the plurality of transport streams are transmitted from a plurality of

devices included in the digital network, (e.g. col. 4, lines 15 – 37, " ...*assigns a unique*

identification number to the TCP... " & col. 6, lines 5 – 26, *"IP packet, source and destination IP*

address, port number, unique identification number");

65.   associating each assigned unique transport stream identifier with a particular device of

the plurality of devices, wherein the particular device transmits the transport stream having the

unique transport stream identifier assigned thereto, (e.g. col. 4, lines 15 – 37, " ...*assigns a*

unique identification number to the TCP... " & col. 6, lines 5 – 26, *"IP packet, source and*

destination IP address, port number, unique identification number");

66.   transmitting to each device of the plurality each assigned unique transport stream

identifier associated therewith, (e.g. col. 4, lines 15 – 37, " ...*assigns a unique identification*

number to the TCP... " & col. 6, lines 5 – 26, *"IP packet, source and destination IP address, port number, unique identification number"*);

67.   receiving a network message from multiple devices of the plurality of devices, each network message including at least one input transport stream identifier, (e.g. col. 6, lines 5 – 26, *"IP packet, source and destination IP address, port number, unique identification number"*); but does not specifically teach using the multiple network messages to determine a hierarchy of devices for the plurality devices.

68.   Rao teaches using the multiple network messages to determine a hierarchy of devices for the plurality devices, (e.g. col. 16, lines 24 – 48, *"User 1 has QoA level of one, User 2 has a QoA level of two, and User 3 has a QoA level of three."*). It would have been obvious to one of ordinary skill in the art at the time the invention was conceived to combine Rao with Tokuyo because it would be more efficient for the higher level users that system's assigned QoA be serviced first so there higher level information can be processed in a timely manner.

69.   As per claim 23, as closely interpreted by the Examiner, Tokuyo teaches the at least one input transport stream identifier is one of the unique transport stream identifiers, (e.g. col. 4, lines 15 – 37, " *...assigns a unique identification number to the TCP...* " & col. 6, lines 5 – 26, *"IP packet, source and destination IP address, port number, unique identification number"*).

70.   As per claim 23, as closely interpreted by the Examiner, Tokuyo teaches the step of using the multiple network messages further includes the step of:

71.   associating a first device of the plurality of devices with a second device of the multiple

devices, wherein the at least one input transport stream identifier of the network message from

the second device includes at least one unique transport stream identifier associated with the first

device, (e.g. col. 7, line 59 – 4, *"src-IP, src-port number, dst-IP, dst-port number"* & col. 8,

lines 34 – 49).

72.   Claims 25 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokuyo

and Rao as applied to claim 22 above, and in further view of Teraoka (6292836).

73.   As per claim 25, as closely interpreted by the Examiner, Tokuyo and Rao do not

specifically teach prior to the step of assigning, receiving a second network message from the

plurality of devices, each second network message per device including an output transport

stream identifier. Teraoka teaches prior to the step of assigning, receiving a second network

message from the plurality of devices, each second network message per device including an

output transport stream identifier, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C,*

port_C}" & col. 6, line 54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address*

of computer C=IPaddr_D"). It would have been obvious to one of ordinary skill in the art at the

time the invention was conceived to combine Teraoka with the combine system of Tokuyo and

Rao because it would be more convenient for a first device in a network to have the ability to

move from one location to another while continual connection with a second device that the first

device was communicating with, while having this process be transparent to both users.

74.   As per claim 26, as closely interpreted by the Examiner, Tokuyo and Rao do not

specifically teach the step of assigning further includes the step of:

75.   using the output transport stream identifier included in each second network message

from the plurality of devices to assign the unique transport stream identifier.

76.   Teraoka teaches the step of assigning further includes the step of:

77.   using the output transport stream identifier included in each second network message

from the plurality of devices to assign the unique transport stream identifier, (e.g. col. 6, lines 20

– 35, *"VendPointAddr-B={VIP_C, port_C}"* & col. 6, line 54 – col. 7, line 8, *"VIP address of*

computer C=VIPaddr_C, IP address of computer C=IPaddr_D"). It would have been obvious to

one of ordinary skill in the art at the time the invention was conceived to combine Teraoka with

the combine system of Tokuyo and Rao because of similar reasons stated above.

78.   As per claim 27, as closely interpreted by the Examiner, Tokuyo teaches sending a

mapping initiation message to a second plurality of devices included in the digital network,

wherein the second plurality of devices includes the first plurality of devices, and each of the

first plurality of devices respond to the mapping initiation message by sending the second

network message, (e.g. col. 4, lines 15 – 37, *" ...assigns a unique identification number to the*

TCP... " & col. 6, lines 5 – 26, *"IP packet, source and destination IP address, port number,*

unique identification number"), but does not specifically teach prior to the step of receiving the

second network message, (e.g. col. 6, lines 20 – 35, *"VendPointAddr-B={VIP_C, port_C}"* &

col. 6, line 54 – col. 7, line 8, *"VIP address of computer C=VIPaddr_C, IP address of computer*

C=IPaddr_D"). It would have been obvious to one of ordinary skill in the art at the time the

invention was conceived to combine Teraoka with the combine system of Tokuyo and Rao

because it would be more efficient for a system to have a layout of the system it would be

traversing in the network so the information that is being sent is received at it's destination with

the least hops and/or failures encountered.

79.   As per claim 28, as closely interpreted by the Examiner, Tokuyo does not specifically

teach determining whether the first plurality of devices is the same as the second plurality of

devices; and

80.   responsive to determining the first plurality of devices is not the same as the second

plurality of devices, generating an alert message.

81.   Rao teaches determining whether the first plurality of devices is the same as the second

plurality of devices, (e.g. col. 20, lines 41 – 59); and

82.   responsive to determining the first plurality of devices is not the same as the second

plurality of devices, generating an alert message, (e.g. col. 20, lines 3 – 13 & 41 – 59). It would

have been obvious to one of ordinary skill in the art at the time the invention was conceived to

combine Teraoka with the combine system of Tokuyo and Rao because it would be more secure

if the system only gave specific access and privileges to users of a specific network. Also in

doing so could block out potential invaders to a system.

83.   Claims 29 – 32 are rejected for similar reasons as stated above.

84.   Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teraoka

as applied to claim 33 above, and in view of Rao (6789118).

85.   As per claim 37, as closely interpreted by the Examiner, Teraoka does not specifically

teach the port is a plurality of input ports, each input port of the plurality of input ports receiving

at least one transport stream having a transport stream identifier associated therewith, and the

processor is adapted to monitor the transport stream identifier of each input transport stream and

respond to changes thereto by generating the network message.

86.   Rao teaches the port is a plurality of input ports, each input port of the plurality of input

ports receiving at least one transport stream having a transport stream identifier associated

therewith, and the processor is adapted to monitor the transport stream identifier of each input

transport stream and respond to changes thereto by generating the network message, (e.g. col. 24,

lines 18 – 34). It would have been obvious to one of ordinary skill in the art at the time the

invention was conceived to combine Rao with Teraoka because if ports have the same

identification number, errors in a system would occur because of the systems inability to

differentiating between a plurality of ports in a system. Assigning a plurality of ports different

identification numbers would make for a more efficient system that does not encounter errors

because of similar port identification numbers.

87.   As per claim 38, as closely interpreted by the Examiner, Teraoka teaches the network

message includes the current transport stream identifier associated with each of the received

input transport streams, (e.g. col. 6, lines 20 – 35).

Response to Arguments

88.   Applicant's arguments filed 3/18/2005 have been fully considered but they are not

persuasive.

89.   In the Remarks, Applicant argues in substance that the limitation of, "grouping multiple

devices of the plurality of devices into a plurality of tiers within the digital network," can be

found in Fig. 4 where it clearly shows one example of multiple devices grouped into a plurality

of tiers.

90.   As to part 1, Examiner agrees with Applicant in stating that Fig. 4 clearly shows one

example of multiple devices grouped into a plurality of tiers, but that is not the limitations. The

limitation described above states the act of "grouping" multiple devices of the plurality o9f

devices into a plurality of tiers. Fig. 4 only shows devices already grouped. There are no tree

diagrams that show the act of "grouping" multiple devices.

91.   In the Remarks, Applicant argues in substance that the limitation of, "determining

whether the first plurality of devices is the same as the second plurality of devices; and

responsive to determining the first plurality of devices is not the same as the second plurality of

devices, generating an alert message," can be found in Fig. 7B and accompanying specification

on page 18, lines 15 – 23 and page 24, line 32 – page 25, line 2.

92.   As to part 2, Examiner agrees with Applicant that the specification teaches the limitation

described above, yet Fig. 7B does not show an "alert message being generated" nor a

determining step as to "whether the first plurality of devices is the same as the second plurality

of devices".

93.   In the Remarks, Applicant argues in substance that an IP address as taught in Teraoka is

not a transport stream identifier (TSID) The TSID identifies a particular stream of data It does

not identify a device. A device with one IP address may be a source or destination for several

transport streams. Teraoka does disclose identifying a particular stream of data. Additionally,

Teraoka does not disclose a processor at the input port that generates a message.

94.   As to part 3, Examiner agrees with Applicant in that Teraoka does disclose identifying a

particular stream of data. This is apparent in the above rejection as restated for the Applicant

above. In response to applicant's argument that the references fail to show certain features of

applicant's invention, it is noted that the features upon which applicant relies (i.e., *input port*) are

not recited in the rejected claim(s). Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re Van

Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Examiner would like to point to the

Amended section of claim 33 which is amended to take out the term *input* so to only state a port.

95.   In the Remarks, Applicant argues in substance that Applicant respectfully submit that

claim 1 contains elements not present in claims 20, 21, 33 – 36 and 39 – 43, and a rejection of

claims 1 – 8 for similar reasons as claims 20, 21, 33 – 36 and 39 – 43 is improper For instance,

none of claims 20, 21, 33 – 36 and 39 – 43 recite a controller adapted to generate a transport

stream map. Therefore, a rejection of claims 1 – 8 for similar reasons as claims 20, 21, 33 – 36

and 39 – 43 is improper and the rejection should be withdrawn.

96.   As to part 4, Examiner would like to draw the Applicant's attention to the cited areas of

the Prior art of record. There are numerous references to devices that generate IP addresses,

source and destination, which map out a path for packets to travel and traverses a router, which

could be interpreted as a controller. Therefore, one of ordinary skill in the art would know that

this could be interpreted as transport stream map. Examiner would also like to point out that

nowhere in the broad claim language is it stated that the transport stream map could be

something specifically different, which leaves one to interpret the claims as broadly as possible.

97.   In the Remarks, Applicant argues in substance that independent claim 22 is allowable for

at least the reason that none of Tokuyo, Rao, or Teraoka disclose, teach, or suggest at least

assigning a unique transport stream identifier to each transport stream of a plurality of transport

streams. Tokuyo discloses a TCP connection ID. A TCP connection ID identifies a connection

between two devices. However, this does not disclose assigning identifiers to individual transport

streams. Neither Rao nor Teraoka corrects this omission.

98.   As to part 5, Examiner would like to draw the Applicant's attention to the prior art of

Tokuyo, in which, not only does Tokuyo teach a TCP connection ID that is uniquely assigned to

each connection that is in the stream or packets that are transmitted. The broad claim language

states that assigning a <u>unique transport stream identifier to each transport stream of a plurality of</u>

<u>transport streams</u>, wherein the <u>plurality of transport streams</u> are transmitted from <u>a plurality of</u>

devices included in the digital network. This could be interpreted as each device sends a stream

or packet and that each device connection is its own unique connection to another device and that

no two devices can have the same address as is well known in the art. Therefore, if each pair of

devices make a connection and each address is unique in the digital network and each device

sends one stream or packet in the plurality of devices, then the "unique identification number"

that is associated with the pair of devices in the connection can act as a type of transport stream

identifier, (e.g., cols. 7 – 8 and described in above rejection).

99.   In the Remarks, Applicant argues in substance that because independent claim 33 is

allowable over the cited art of record dependent claims 37 and 38 are allowable as a matter of

law for at least the reason that dependent claims 37 and 38 contain all the steps/features of

independent claim 33.

100.   As to part 6, Examiner would like to draw the Applicant's attention to the above

responses to remarks for they apply to this remark as well.

101.   Applicant's arguments with respect to claims 9 and 10 have been considered but are moot

in view of the new ground(s) of rejection from limitations, "wherein the second particular device

receives a transport stream with a transport stream ID transmitted from the first particular

device," and "the plurality of tiers including a source tier, an intermediate tier, and an output

tier."

Conclusion

102.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David E. England whose telephone number is 571-272-3912.

The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
Art Unit 2143

De

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER

27 June 05